MULTIMEDIA WORLD

VR AND THE INTERNET

BY TRACY SWEDLOW

VRML at the Crossroads

Hello. My name is Tracy Swedlow. I am pleased to say that I will be writing the following column, entitled "VR and the Internet." It is the first time such a column has appeared in this magazine, and I am excited to contribute it. My main goal is to get you closer to the innovations, the people, the events, and the companies that are spearheading the convergence of distributed networking and virtual reality technologies. The first subject I intend to tackle is the state and the future of the VRML development community.

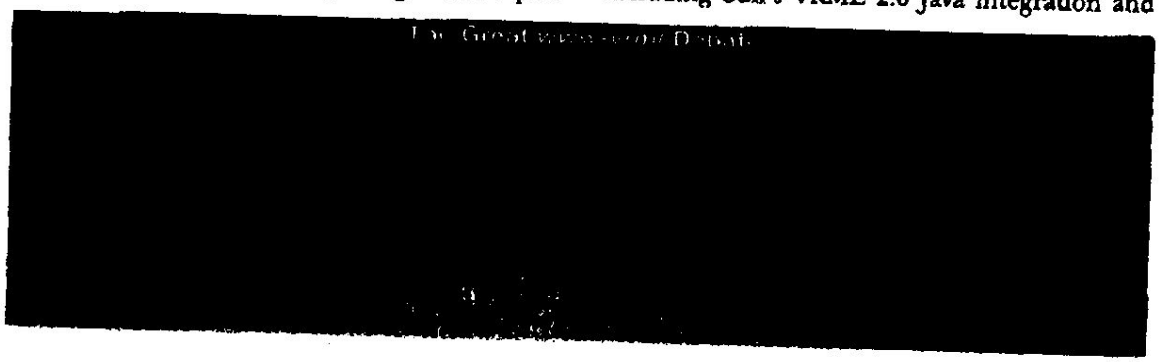
The VRML development community has experienced some growing pains. Plainly seen in the postings on the *www-vrml* mailing list, differences between the participants have arisen over issues such as the delay in bringing the technology to market, the influence of large corporations, and concerns over the solidity of the original specification.

Back at SIGGRAPH '95 in early August, it was clear to all those who attended the special VRML Birds of a Feather session that the number of interested parties was increasing and that everyone anticipated the technology was about to undergo rapid development. At the BOF session speaker after speaker made rosy promises about the next stage (VRML versions 1.1 and 2.0) of the development process. Informally, a request for future proposals went out to the community. Who constituted that community? Nobody really knew and few cared—everyone wanted to get started.

The next gathering of the VRML community was at VRML '95 in San Diego, the first conference devoted to the technology. While it was apparent at SIGGRAPH '95 that the development of VRML was no longer a grassroots phenomenon, it was even clearer at VRML '95 that big businesses—such as Microsoft, Sun, Sony, and Apple—were here to influence its direction. Only a week earlier, Sun and SGI made a big public announcement proclaiming VRML and Java as "core technologies" for the future. Tellingly, a founding member of the VRML development community said to me in amazement. "I don't mind if everyone wants a piece of the pie, but they want my piece of the pie as well."

Among the more popular proposals presented at VRML '95 were Tamara Munzner's "Visualizing the Structure of the World Wide Web in 3D Hyperbolic Space" and Tom Meyer's "Adding Behavior to VRML." Although not included in the original program, Microsoft introduced its new multimedia/3D animation technology ActiveVRML, drawing lots of questions and criticism (see *www-vrml* mailing list). "Moving Worlds" (which was also not on the original program) was collaboratively presented by representatives from WorldMaker, Sony Computer Science Laboratory, and Silicon Graphics. This proposal drew much support, because not only was it considered a solid attempt at developing three-dimensionality for distributed networks, but it also focused on the important criteria (performance, scalability, composability, authoring, and power). In addition, this proposal gained favor because, unlike Microsoft's specification, it was developed and presented much earlier and within the full sight of the Virtual Architecture Group (the reigning body of VRML authority). Many did, however, feel that Moving Worlds had some serious weaknesses.

Besides these proposals, several others, including Sun's VRML 2.0 Java integration and



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Apple's 3DMF VRML 2.0 proposal, were discussed, but went formally unpresented.

At the end of the conference Mark Pesce (the co-inventor of VRML) addressed the group with an impassioned speech entitled "Root, Trunk, Branch, Crown." He spoke of the need for a fee-based consortium modeled after the W^3C (World Wide Web), which Tim Berners-Lee set up a couple of years earlier. The consortium would require individuals and companies to pay from $5,000 to $50,000 for membership. The purpose of the body (to be formed at the WWW 5 in Paris in April of 1996) would be to "channel work on specification and standards processes." While this was not a new idea (he had announced the plan at SIGGRAPH), it seemed to have become more controversial in light of the millions of business dollars flowing into development. In fact, many members of the community worry that the consortium will be influenced by corporations intent on developing their own brand of VRML. To prevent that situation from happening, Pesce assured the group that establishing a consortium would protect the "pioneers" and the "grassroots effort" and at the same time "moderate the behavior of corporations." He reiterated that the formation of a consortium was the best type of protection for the technology and would enable it to grow and flourish with the additional infusion of cash.

A raging debate on the *www-vrml* mailing list ensued after VRML '95. Many of the postings on the list were heated and thrashed about on subjects that had more to do with managing the process than with inventing the technology. The debate focused on four major issues: whether the community should accept new proposals such as Microsoft's ActiveVRML and Sun's VRML 2.0 so late in the game (many complained that Microsoft did not share its ideas for a new specification and acted independently until the community suited the corporation's needs); whether to integrate the proposals or seek out the single best one for the job; how voting power would be orchestrated once the consortium was in place; and what the role of the Virtual Architecture Group is and what authority it has to make difficult decisions.

Nonetheless, to accommodate the corporations that had not responded to the original "informal" request for proposals on the future of VRML, on January 5 a "formal" request for proposals was sent out by Jan Hardenbergh and other members of the VAG. It asked that those wishing to submit proposals send them in by February 2 to be discussed throughout February and into March. At the time of this writing, no decision had been made.

Clearly, in the gap of one month or two in which the 2.0 specification will be discussed, the larger corporations will spend a lot of cash to develop a VRML strategy that works best for them. Without that kind of deep-pocketed infrastructure, the VRML development community needs a consortium to direct its efforts. One thing's for sure, however: There is a need for speed, and April 1996 may be too late.

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